

(No Model.)

G. F. WEBB.

ELECTRIC APPARATUS FOR TREATING DEAFNESS.

No. 454,313.

Patented June 16, 1891.

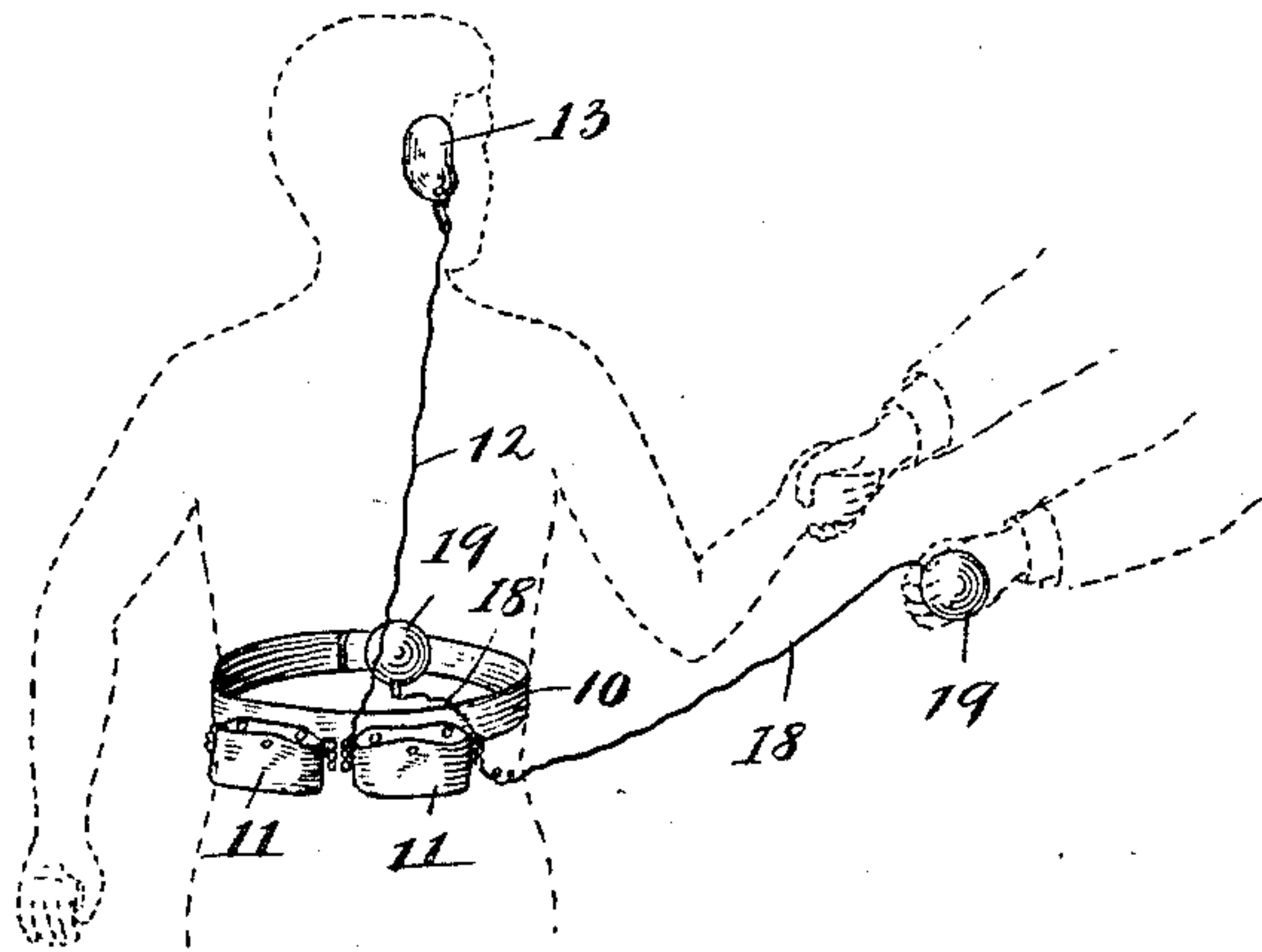
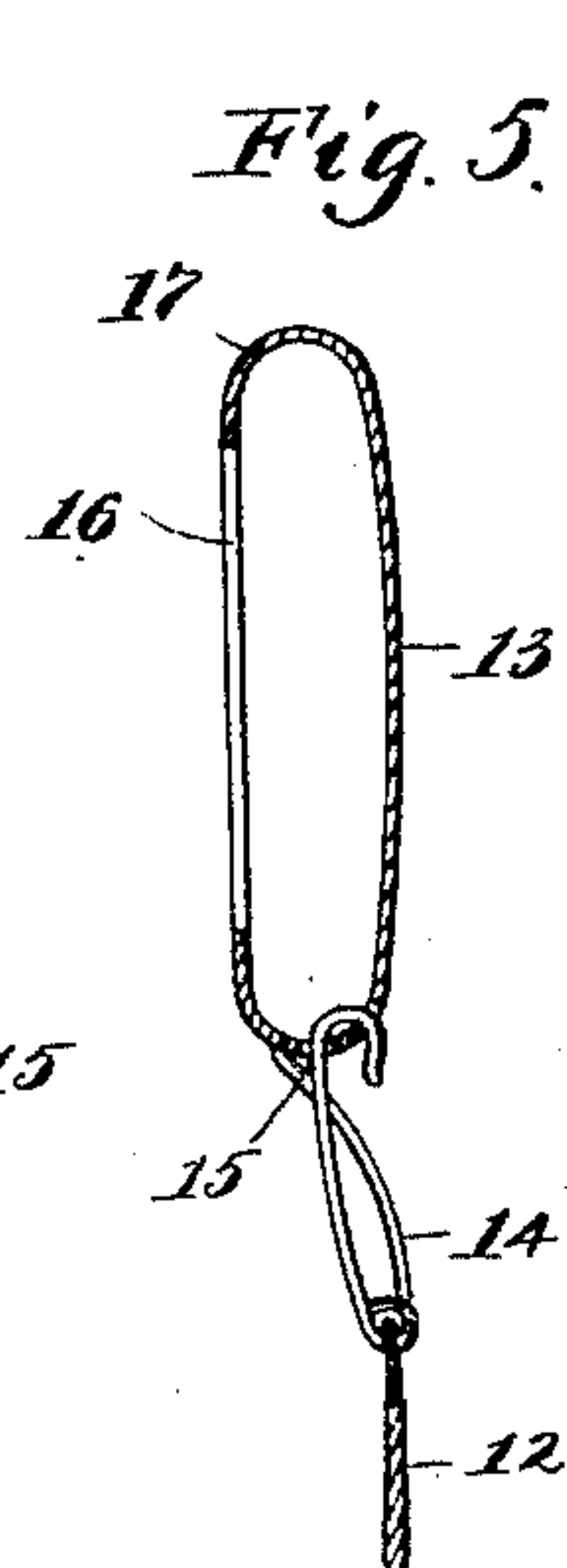
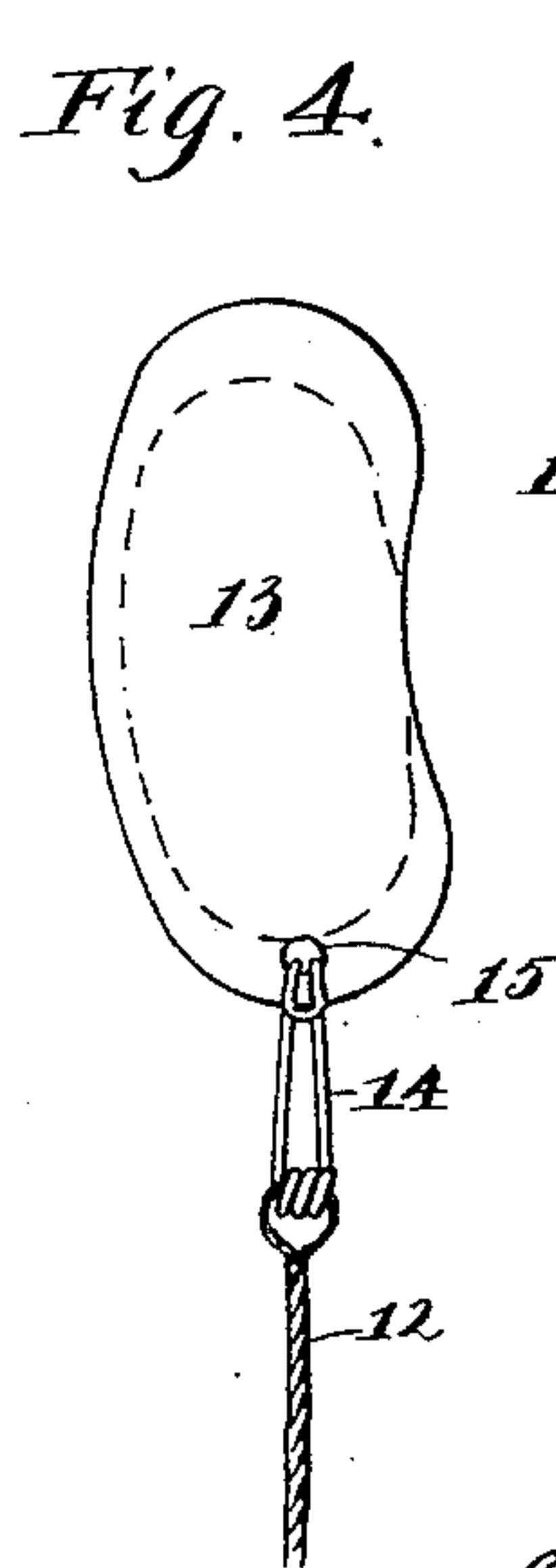
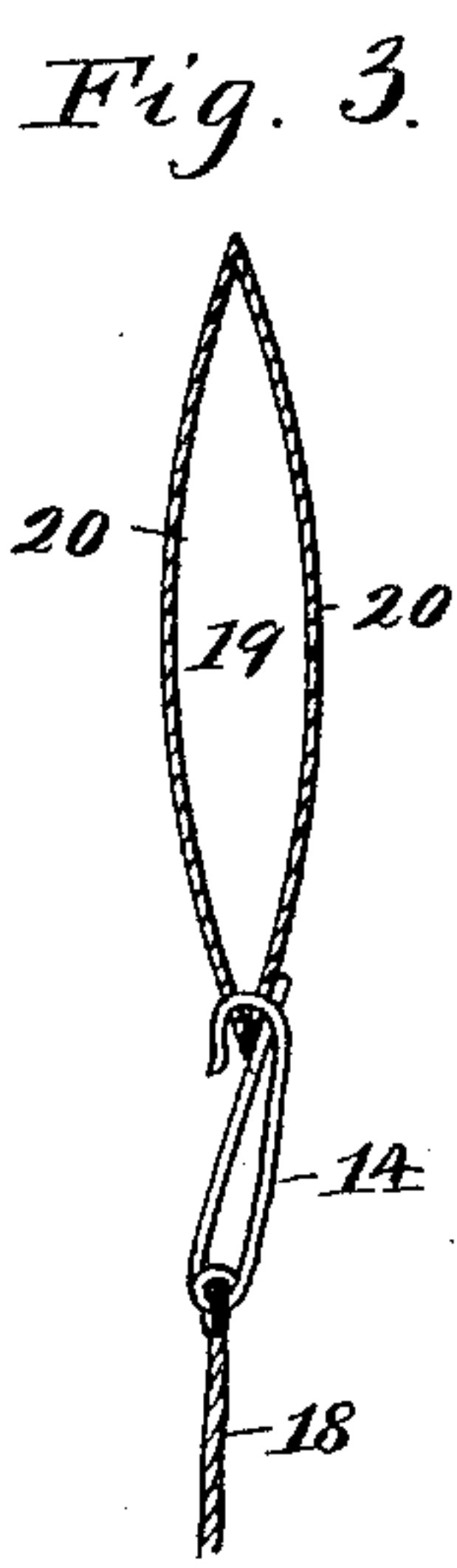
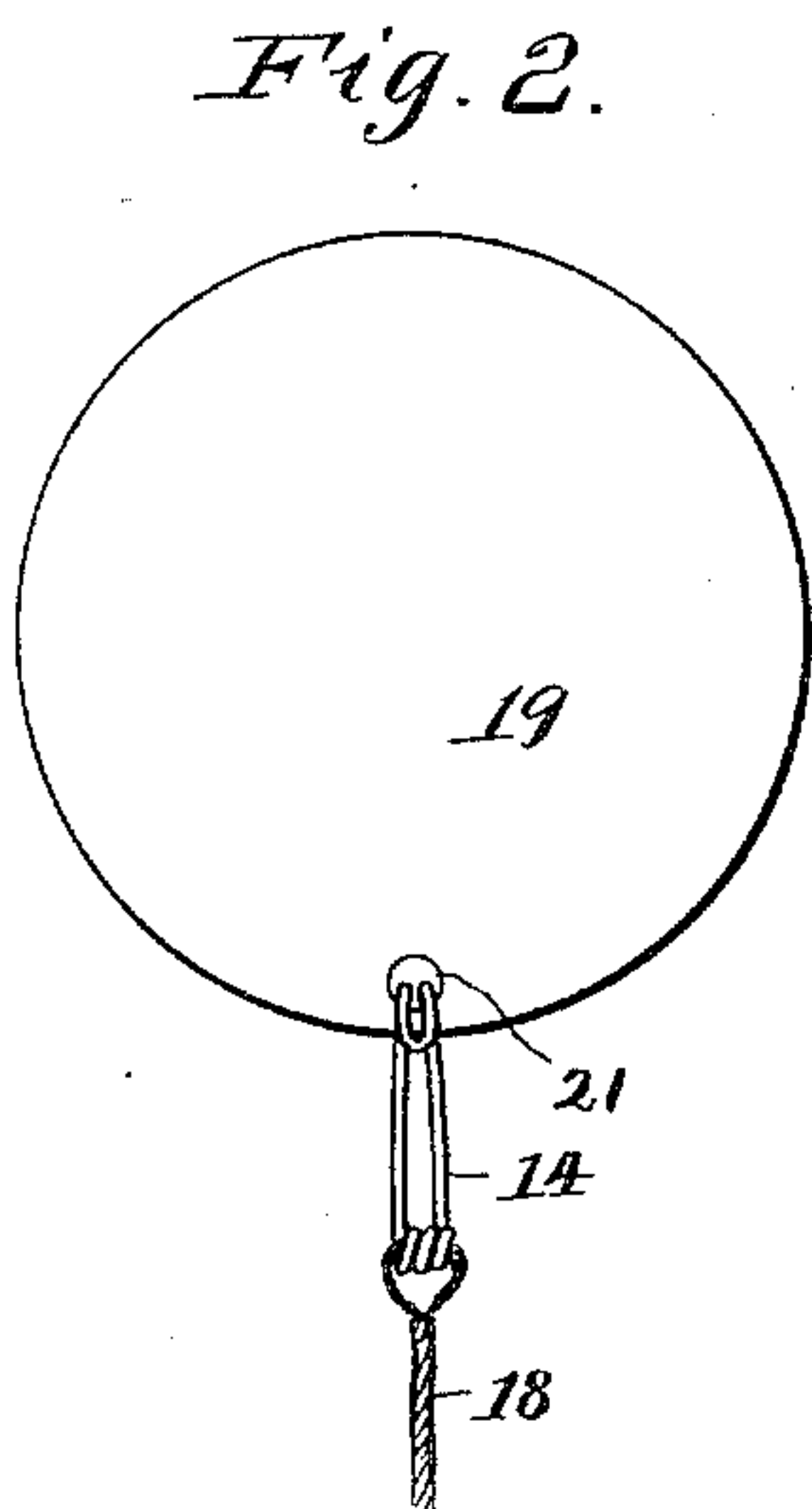


Fig. 1.



WITNESSES:

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ELECTRIC APPARATUS FOR TREATING DEAFNESS.

SPECIFICATION forming part of Letters Patent No. 454,313, dated June 16, 1891.

Application filed April 21, 1891. Serial No. 389,837. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. WEBB, of Jefferson, in the county of Ashtabula and State of Ohio, have invented a new and Improved Apparatus for Treating Deafness, of which the following is a full, clear, and exact description.

My invention relates to improvements in an apparatus for treating deafness; and the object of my invention is to produce a simple and efficient device which may be constantly used to remove the source of deafness, which may be easily applied, and which, while serving as a remedy, also enables the patient to hear distinctly.

To this end my invention consists in an apparatus which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 shows an apparatus applied to a patient and how it is used when conversation is to be carried on with another person. Fig. 2 is a detail front view of the electrode, which is worn at the stomach. Fig. 3 is a vertical cross-section of the same. Fig. 4 is a detail side elevation of the ear-electrode, and Fig. 5 is a vertical cross-section of the same.

In carrying out my invention it is necessary to have a suitable galvanic battery, and a battery which may be worn upon the body is preferably employed, as it is much more convenient. A belt 10 is provided, which belt is worn about the waist, and the belt carries body-batteries 11, one or more being used, as desired. One pole of one or both batteries is connected by means of a wire 12 to an electrode 13, the connection between the wire and the electrode being made by snapping the hook 14, which is secured to the wire, into a perforation 15 in the lower end of the electrode, although any suitable connection may be made. The electrode 13 is shaped approximately like a human ear, is provided with an opening 16 on one side, so that it may be conveniently placed upon the ear, and it is doubled over around the opening, as shown at 17, so that when placed upon the ear it will easily maintain its position. The electrode is preferably made of silver, that being a good conductor and not

likely to injure the ear. The opposite pole of one or both batteries connects by a wire 18 with an electrode 19, the connection being made by snapping the hook 14 of the wire into an opening 21 formed in the electrode 19. While the disease is being treated, the electrode 19 is worn at the stomach and is supported upon the belt. The electrode 19 is preferably made of two convex circular pieces 20, which are united at the edges, so that the electrode will have opposite convex sides. The circuit will then be from the battery 11 through the wire 12, the electrode 13, the body of the patient, the electrode 19, and the wire 18 to the battery. The battery is adjusted so that a mild current will be kept flowing through the ear, and as a result the deafness will be either cured or greatly relieved.

When this apparatus is worn, the clothing of the person is arranged so that the stomach-electrode may be easily removed; and if the patient desires to carry on the conversation he removes the stomach-electrode, and the person with whom he is to converse takes it in one hand and with the other hand clasps the hand of the patient. The circuit will then be from the battery through the wire 12, the electrode 13, the two persons, the electrode 19, and the wire 18 back to the battery.

In practice it is found that when the circuit is closed through the two persons in this manner and through the organ of the ear that even though the conversation is carried on in a low tone the deaf person can hear distinctly.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. An apparatus of the character described, comprising a battery, a belt, an electrode supported on the belt and contacting with a person, an electrode shaped to fit the ear, and connections between the electrodes and the battery, substantially as described.

2. In an apparatus of the character described, the electrode 13, shaped to rest upon an ear and having an opening in one side to receive the ear, substantially as described.

GEORGE F. WEBB.

Witnesses:

JNO. L. HEITZMAN,
W. J. BELL.